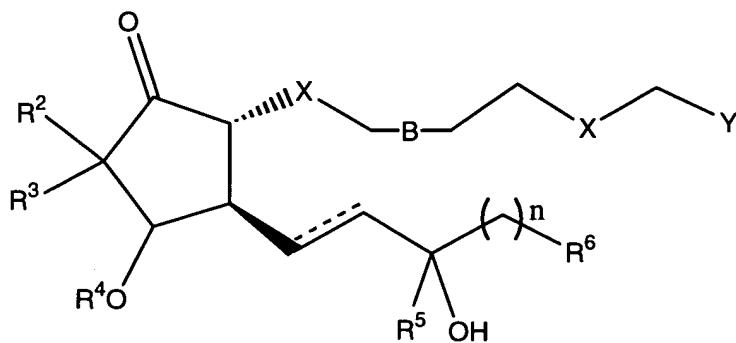


**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A method of treating ocular hypertension or glaucoma which comprises administering to an animal having ocular hypertension or glaucoma a  
 5 therapeutically effective amount of a compound represented by the general Formula I:



**Formula I**

10 wherein the dashed lines indicate the presence or absence of a bond, the hatched wedges indicate the  $\alpha$  (down) configuration, and the solid triangles indicate the  $\beta$  (up) configuration;

B is a single, double, or triple covalent bond;

15 n is 0-6;

X is CH<sub>2</sub>, S or O;

Y is CONHCH<sub>2</sub>CH<sub>2</sub>OH or CON(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>,

~~R is H, C<sub>1-6</sub> alkyl or C<sub>2-6</sub> alkenyl;~~

20 R<sup>2</sup> and R<sup>3</sup> are C<sub>1-6</sub> linear alkyl which may be the same or different, and may be bonded to each other such that they form a ring incorporating the carbon to which they are commonly attached;

R<sup>4</sup> is hydrogen, R, C(=O)R, or any group that is easily removed under physiological conditions such that R<sup>4</sup> is effectively hydrogen;

R is H, C<sub>1-6</sub> alkyl or C<sub>2-6</sub> alkenyl;

R<sup>5</sup> is hydrogen or R; and

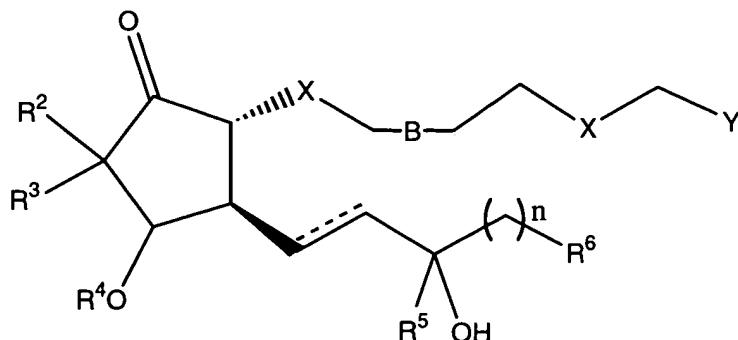
R<sup>6</sup> is

- i) hydrogen;
- ii) a linear or branched hydrocarbon containing between 1 and 8 carbon atoms, which may contain one or more double or triple bonds, or oxygen or halogen derivatives of said hydrocarbon, wherein 1-3 carbon or hydrogen atoms may be substituted by O or a halogen; or
- iii) aryloxy, heteroaryloxy, C<sub>3-8</sub> cycloalkyloxy, C<sub>3-8</sub> cycloalkyl, C<sub>6-10</sub> aryl or C<sub>3-10</sub> heteroaryl, wherein one or more carbons is substituted with N, O, or S; and which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>6-10</sub> aryl, C<sub>3-10</sub> heteroaryl, aryloxy, heteroaryloxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.

2. (Original) A method of treating ocular hypertension or glaucoma which comprises administering to an animal having ocular hypertension or glaucoma a

- therapeutically effective amount of a compound selected from the group consisting of (3-((1*R*,4*S*,5*S*)-5-(3-chloro-benzo[b]thiophen-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentylsulfanyl}-propylsulfanyl)-acetic acid methyl ester (**21**, **22**);  
(3-((1*R*,4*S*,5*S*)-5-(3-chloro-benzo[b]thiophen-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentylsulfanyl}-propylsulfanyl)-acetic acid (**23**, **24**);  
(*Z*)-7-((1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-yonic acid methyl ester (**34**, **35**);  
(*Z*)-7-((1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-yonic acid (**36**,**37**);  
(*Z*)-7-((1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-enoic acid methyl ester (**38**,**39**);  
(*Z*)-7-((1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-enoic acid (**40**,**41**);  
(*Z*)-7-[(1*R*,4*S*,5*R*)-4-Hydroxy-5-((*E*)-3-hydroxy-5-phenyl-pent-1-enyl)-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid methyl ester (**50**,**51**)

- (Z)-7-[(1R,4S,5R)-4-Hydroxy-5-((E)-3-hydroxy-5-phenyl-pent-1-enyl)-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**52,53**)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**54,55**)
- 5 7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-heptanoic acid (**56,57**)
- (Z)-7-[(1R,4S,5R)-5-(4-Benzo[b]thiophen-2-yl-3-hydroxy-butyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**58,59**)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid ethylamide (**60,61**)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid diethylamide (**62,63**)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (2-hydroxy-ethyl)-amide (**64,65**)
- 15 (3S,4R,5R)-4-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-3-hydroxy-2,2-dimethyl-5-[(Z)-6-(1-H-tetrazol-5-yl)-hex-2-enyl]-cyclopentanone (**66,67**) (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid amide (**68,69**)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid methyl ester (**70,71**)
- 20 7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-ynoic acid methyl ester (**72,73**)
- 7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-ynoic acid (**74,75**).
- 25 3. (Original) A compound represented by Formula I:

**Formula I**

wherein the dashed lines indicate the presence or absence of a bond, the hatched wedges

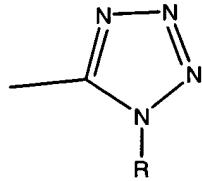
5 indicate the  $\alpha$  (down) configuration, and the solid triangles indicate the  $\beta$  (up) configuration;

B is a single, double, or triple covalent bond;

n is 0-6;

X is CH<sub>2</sub>, S or O;

10 Y is any pharmaceutically acceptable salt of CO<sub>2</sub>H, or CO<sub>2</sub>R, CONR<sub>2</sub>, CONHCH<sub>2</sub>CH<sub>2</sub>OH, CON(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>, CH<sub>2</sub>OR, P(O)(OR)<sub>2</sub>, CONRSO<sub>2</sub>R, SONR<sub>2</sub>, or



R is H, C<sub>1-6</sub> alkyl or C<sub>2-6</sub> alkenyl;

15 R<sup>2</sup> and R<sup>3</sup> are C<sub>1-6</sub> linear alkyl which may be the same or different, and may be bonded to each other such that they form a ring incorporating the carbon to which they are commonly attached;

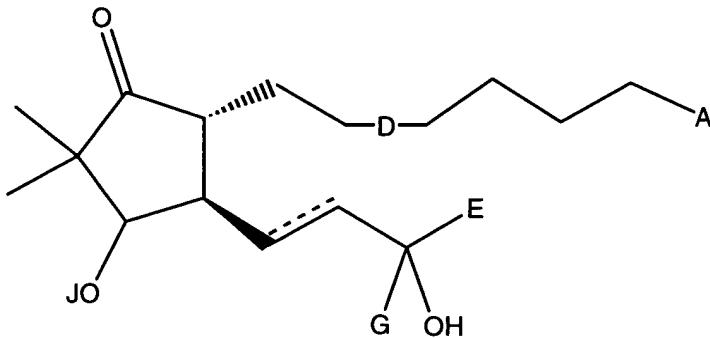
R<sup>4</sup> is hydrogen, R, C(=O)R, or any group that is easily removed under physiological conditions such that R<sup>4</sup> is effectively hydrogen;

R<sup>5</sup> is hydrogen or R;

20 R<sup>6</sup> is

- i) hydrogen;

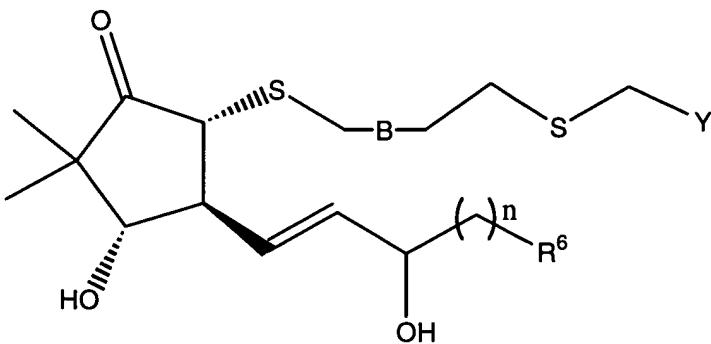
- ii) a linear or branched hydrocarbon containing between 1 and 8 carbon atoms, which may contain one or more double or triple bonds, or oxygen or halogen derivatives of said hydrocarbon, wherein 1-3 carbon or hydrogen atoms may be substituted by O or a halogen; or
- 5 iii) aryloxy, heteroaryloxy, C<sub>3-8</sub> cycloalkyloxy, C<sub>3-8</sub> cycloalkyl, C<sub>6-10</sub> aryl or C<sub>3-10</sub> heteroaryl, wherein one or more carbons is substituted with N, O, or S; and which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>6-10</sub> aryl, C<sub>3-10</sub> heteroaryl, aryloxy, heteroaryloxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R; and
- 10 the compound of Formula I is not a compound of Formula II



**Formula II**

- wherein A is CO<sub>2</sub>H, CO<sub>2</sub>Me, or CO<sub>2</sub>Et;
- D is a single, double, or triple covalent bond;
- 15 E is a linear, branched, or cycloalkyl chain of 3 to 7 carbons, trifluoromethylbutyl, hydroxylalkyl, or CH<sub>2</sub>R<sup>7</sup> wherein R<sup>7</sup> is phenyl, cyclopentyl, phenoxy, chlorophenoxy, propoxy, or -CH<sub>2</sub>SCH<sub>2</sub>CH<sub>3</sub>;
- J is hydrogen, R, C(=O)R, or any group that is easily removed under physiological conditions such that R<sup>4</sup> is effectively hydrogen; and
- 20 G is H or CH<sub>3</sub>.
4. (Currently Amended) The compound of claim 48 3 wherein A is CO<sub>2</sub>R<sup>8</sup>, wherein R<sup>8</sup> is any linear, branched, or cyclic alkyl group having from 3 to 6 carbons.

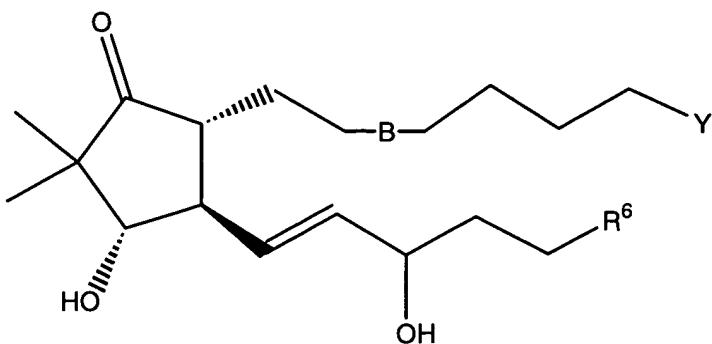
5. (Currently Amended) The compound of claim 18 3 which is further represented by Formula III



**Formula III**

wherein Y is CO<sub>2</sub>R, or any pharmaceutically acceptable salt of CO<sub>2</sub>H.

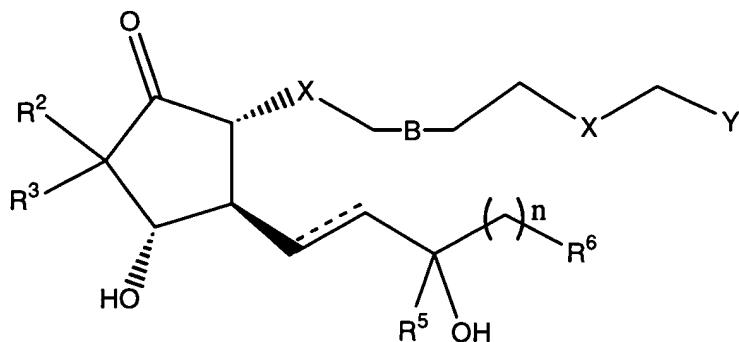
- 5 6. (Currently Amended) The compound of claim 19 5 wherein R<sup>6</sup> is C<sub>6-10</sub> aryl or C<sub>3-10</sub> heteroaryl, wherein one or more carbons is substituted with N, O, or S; and which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.
7. (Currently Amended) The compound of claim 20 6 wherein R<sup>6</sup> is naphthyl, benzofuranyl, or benzothienyl, which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.
8. (Currently Amended) The compound of claim 21 7 wherein Y is CO<sub>2</sub>H or CO<sub>2</sub>Me.
- 15 9. (Currently Amended) The compound of claim 22 8 where R<sup>6</sup> is 3-chlorobenzothien-2-yl.
10. (Currently Amended) The compound of claim 23 9 where n is 2.
11. (Currently Amended) The compound of claim 24 10 where B is a single bond.
12. (Currently Amended) The compound of claim 18 3 which is further represented by Formula IV
- 20



wherein Y is  $\text{CO}_2\text{R}$  or any pharmaceutically acceptable salt of  $\text{CO}_2\text{H}$ ; and

$\text{R}^6$  is  $\text{C}_{6-10}$  aryl or  $\text{C}_{3-10}$  heteroaryl, wherein one or more carbons is substituted with N, O, or S; and which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy,  $\text{C}_{1-6}$  alkyl, OR, SR, and  $\text{SO}_2\text{R}$ .

- 5      13. (Currently Amended) The compound of claim 26 12 wherein Y is  $\text{CO}_2\text{H}$  or  $\text{CO}_2\text{Me}$ .
- 14. (Currently Amended) The compound of claim 27 13 wherein  $\text{R}^6$  is phenyl.
- 15. (Currently Amended) The compound of claim 28 14 wherein B is a double bond.
- 10     16. (Currently Amended) The compound of claim 27 13 wherein  $\text{R}^6$  is napthyl, benzofuranyl, or benzothienyl, which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy,  $\text{C}_{1-6}$  alkyl, OR, SR, and  $\text{SO}_2\text{R}$ .
- 17. (Currently Amended) The compound of claim 30 16 wherein  $\text{R}^6$  is 3-chlorobenzothien-2-yl.
- 15     18. (Currently Amended) The compound of claim 34 17 wherein B is a double or triple bond.
- 19. (Currently Amended) The compound of claim 48 3 which is further represented by Formula V

**Formula V**

wherein at least one of R<sup>2</sup> and R<sup>3</sup> is not methyl.

20. (Currently Amended) The compound of claim 33 19 wherein R<sup>2</sup> and R<sup>3</sup> have a total number of carbon atoms of 6 or less.

5 21. (Currently Amended) The compound of claim 34 20 wherein R<sup>5</sup> is hydrogen.

22. (Currently Amended) The compound of claim 48 3 wherein said compound is selected from the group consisting of

(3-((1*R*,4*S*,5*S*)-5-(3-chloro-benzo[b]thiophen-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentylsulfanyl}-propylsulfanyl)-acetic acid methyl ester (**21**,

10 **22**);

(3-((1*R*,4*S*,5*S*)-5-(3-chloro-benzo[b]thiophen-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentylsulfanyl}-propylsulfanyl)-acetic acid (**23**, **24**);

(*Z*)-7-((1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-yonic acid methyl ester (**34**, **35**);

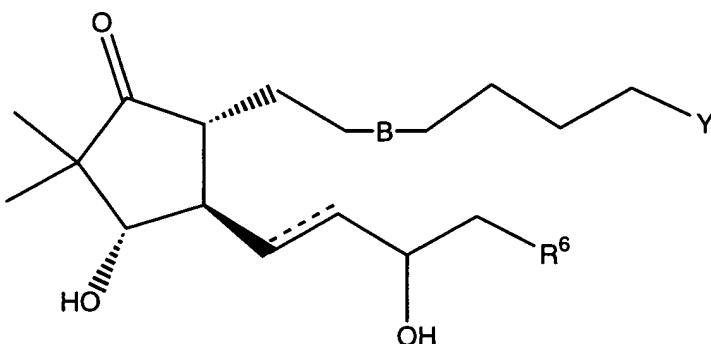
15 (*Z*)-7-((1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-yonic acid (**36**,**37**);

(*Z*)-7-((1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-enoic acid methyl ester (**38**,**39**);

(*Z*)-7-((1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-enoic acid (**40**,**41**);

(*Z*)-7-[(1*R*,4*S*,5*R*)-4-Hydroxy-5-((*E*)-3-hydroxy-5-phenyl-pent-1-enyl)-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid methyl ester (**50**,**51**)

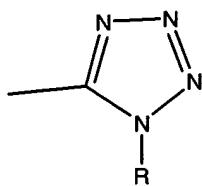
- (Z)-7-[(1R,4S,5R)-4-Hydroxy-5-((E)-3-hydroxy-5-phenyl-pent-1-enyl)-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (52,53)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (54,55)
- 5 7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-heptanoic acid (56,57)
- (Z)-7-[(1R,4S,5R)-5-(4-Benzo[b]thiophen-2-yl-3-hydroxy-butyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (58,59)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid ethylamide (60,61)
- 10 (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid diethylamide (62,63)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (2-hydroxy-ethyl)-amide (64,65)
- 15 (3S,4R,5R)-4-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-3-hydroxy-2,2-dimethyl-5-[(Z)-6-(1-H-tetrazol-5-yl)-hex-2-enyl]-cyclopentanone (66,67) (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid amide (68,69)
- (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid methyl ester (70,71)
- 20 7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-ynoic acid methyl ester (72,73)
- 7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-ynoic acid (74,75).
- 25 23. (Currently Amended) The compound of claim 18 3 which is further represented by Formula XIII

**Formula XIII**

wherein B represents a single or double bond;

and R<sup>6</sup> is napthyl, benzofuranyl, or benzothienyl, which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.

- 5        24. (Currently Amended) The compound of claim 47 23 wherein R<sup>6</sup> is benzothien-2-yl.
25. (Currently Amended) The compound of claim 48 24 wherein Y is any pharmaceutically acceptable salt of CO<sub>2</sub>H, or CO<sub>2</sub>R, CONR<sub>2</sub>, CONHCH<sub>2</sub>CH<sub>2</sub>OH,
- 10      CON(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>, or



26. (Currently Amended) The compound of claim 49 25 wherein the dashed line indicates the presence of a bond and B is a double bond.
27. (Currently Amended) The compound of claim 49 25 wherein the dashed line indicates the presence of a bond and B is a single bond.
- 15      28. (Currently Amended) The compound of claim 49 25 wherein the dashed line indicates the absence of a bond and B is a double bond.